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NEW WHEEL LOADER OFFERS HIGH-LIFT OPTION PAGE 3

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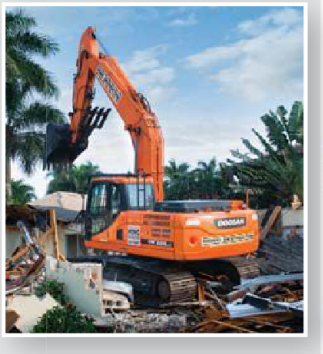

ABOUT THE COVER

In business since 2002, Honc Destruction uses the power of Doosan crawler excavators to keep up with the growing demolition needs of residential and commercial building owners.

DOOSAN WEB GUIDE

More information about Doosan products is just a click away.

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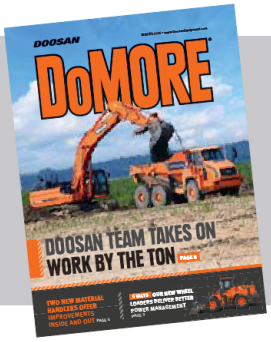

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DOOSAN

DUMP, DIG, LIFT AND REPEAT

Do you need a durable, reliable and fuel-efficient wheel loader with a 3-cubic-yard bucket capacity? If so, Doosan now offers the DL220-5 wheel loader.

Cab enhancements
The DL220-5 cab includes an adjustable steering column to provide more leg room, ease of operation and more floor space; a new fuel consumption gauge displaying real-time fuel usage; and a simplified keypad for easier operation and cleaning.

Good all-around visibility
Two rear LED lamps are more efficient than the prior lamps, providing better rear visibility when working at night. An adjustable sun visor helps to limit direct sunlight inside the wheel loader cab for improved operating conditions.

More dump height
For operators requiring additional dumping capabilities, a new high-lift Z-bar configuration extends the dump height 18 inches above the standard DL220-5. This configuration is ideal for loading material into high-sided trucks or high hoppers, building stockpiles or handling solid waste.

Traction when you need it most
Standard limited-slip differentials allow the wheel with the most traction to receive the proper torque, providing superior tractive effort, especially when digging, grading or loading trucks. Available as an option is a hydraulic locking front and conventional rear differential.

Fuel savings
Configure the auto-shutdown system to help reduce fuel consumption when the machine is sitting idle. When enabled, the system will shut down the wheel loader's engine when the preset idle time is met — from 3 to 60 minutes.

Maintenance made easy
Additional oil-sampling ports improve preventive maintenance procedures, and various fluid pressures are viewable via the dash panel, allowing monitoring from the cab.

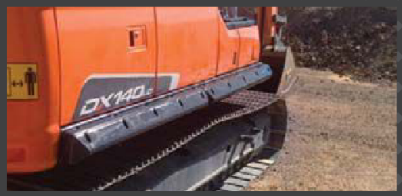
Visit **www.DoosanEquipment.com** and click on the Wheel Loaders link on the Products tab to learn more about Doosan wheel loaders and approved attachments.

GAIN MORE PROTECTION WITH NEW SIDE BUMPERS

Protect your excavator when working in general construction or demolition applications with new Doosan side bumpers.

The new bumpers are a dealer-installed option that adds more protection to the excavator's doors and pump compartments, helping reduce wear on the machine.

Doosan side bumpers are approved for use on 12 excavators — DX140LC-5 through DX530LC-5 crawler models; and DX140W-5 through DX210W-5 wheel models.



Not available for DX140LCR-5 and DX235LCR-5 crawler excavators.

DOOSAN EQUIPMENT GOOD FIT FOR BIG INFRASTRUCTURE CONTRACTORS

For two successful highway and bridge contractors, Lane Construction and Branch Highways, productivity is key for completing the high volume of infrastructure projects that are critical to their success.

With dozens of large, complex projects in progress simultaneously, both firms rely on dependable construction equipment that delivers superior results. And Doosan construction equipment fits their needs well.

COMPANY INFO

Business: Lane Construction
In business since: 1890
Location: Cheshire, Connecticut
Doosan machines: Two wheel excavators and two crawler excavators
Doosan dealer: H&E Equipment

Lane Equipment matches Doosan equipment to job needs

For Lane Construction, the pre-project planning process is an important step for allocating the proper equipment for the job. Equipment managers, project engineers and others meet to discuss jobsite requirements and determine which machines will work best in each project phase.

"In our Mid-Atlantic region, we have plenty of options — 800 to 900 pieces of equipment — so we can match machines to our jobsite needs very well," says Aaron Gonzalez, one of the company's equipment managers in the region. "Our goal is to try to do an entire job ourselves. At times we hire a sub, but our equipment inventory gives us the capability to handle most of the work."

For more than 120 years, Lane Construction has been a leader in the construction of highways and bridges. *Engineering News-Record* magazine ranks the company as the nation's largest highway contractor. It works within several core sectors in the transportation industry, including earthwork, utility relocation, drainage, concrete structures and asphalt paving. The multi-billion-dollar company also has facilities for aggregate production and the manufacture of concrete and asphalt pavement.

Lane Construction's Mid-Atlantic region, based in Chantilly, Virginia, has invested in high-production Doosan excavators in recent years

from an H&E Equipment branch in Warrenton, Virginia.

"The performance of these machines really opened our eyes to what Doosan equipment can do," Gonzalez says.

The company's first DX190W wheel excavator was purchased in 2011. The four-year-old used machine performed so well that it opened the eyes of company personnel — both management and operators — to the many benefits of Doosan excavators.

"At the time of purchase, our expectations for the first DX190W were not very high," Gonzalez says. "It turned out to be an amazing workhorse, with minimal maintenance expenses. The machine is still working 8 to 12 hours a day, five or six days a week."

He says that wheel excavator has returned the company's investment many times over. Part of the success was due to how fast operators bought in to using it. "We had some guys who were loyal to other brands and they were initially skeptical," Gonzalez says. "After running the DX190W for a few minutes, they were sold. When the operators are on board, it helps productivity."

Since then, the company has purchased additional Doosan equipment, including two Doosan excavators that worked at a pair of high-profile highway and bridge projects in 2015.

A DX350LC-3 was on a jobsite in Roanoke, Virginia, where the company worked on a $38 million design-build contract to complete the partial interchange at Interstate 581 and Valley View Boulevard. "The Doosan excavator at this site was digging, lifting barriers and moving trench boxes," Gonzalez says. "The machine was unstoppable and very dependable. Its performance really stood out."

Another Doosan excavator was selected to work on a highway and bridge project about 35 miles south of Washington D.C. At the intersection of Interstate 66 and Route 15, near Haymarket, Virginia, the company designed and built a diverging-diamond interchange (see illustration below). Gonzalez says that when the company looked at the functions that had to be performed at the Haymarket location, it was obvious a wheel excavator would be needed throughout the project. The machine had to be powerful enough to move barriers, dig and grade. But it also had to be small enough to work in a fairly narrow space next to barriers and traffic.

The choice for this job was a DX190W-3 wheel excavator, a machine that rates high in durability, operator comfort, productivity and fuel efficiency. The unit, which will be at the Haymarket jobsite until it is concluded in 2017, is ideal because of its ability to work next to a heavy volume of traffic.

"Maneuverability is a must," Gonzalez says. "So, too, is versatility and productivity. The DX190W is a big help on this project."

COMPANY INFO

Business: Branch Highways Inc.
In business since: 1986
(parent organization was started in 1963)
Location: Roanoke, Virginia
Doosan machines: Three crawler excavators and two wheel loaders
Doosan dealer: H&E Equipment

Branch Highways relies on versatile Doosan equipment to handle increased workload

Branch Highways, one of the nation's premier heavy/highway contractors, has 20 to 25 projects during a typical summer throughout the Mid-Atlantic and Southeast areas. In 2015, however, the number jumped up to around 35 to 40.

To handle the increased workload, the full-service company needed more employees and more equipment. The employee count doubled the past two years. While some equipment was added through purchase and rental, the firm had to rely on its machine inventory — which had proven to be versatile and reliable. There was little time to waste as the signed contracts arrived.

"The release of both federal and state funds for infrastructure improvements, not just roads and bridges, has really helped us keep busy," says Chris Caldwell, an equipment general foreman based in Roanoke, Virginia. "Department of Transportation projects have been a staple of our business from day one. We are still doing plenty of that work and expanding into other areas, such as building concrete pads for utility firms."

In many cases, Doosan excavators and wheel loaders have delivered just what the company needed to handle the increased workload productively and efficiently.

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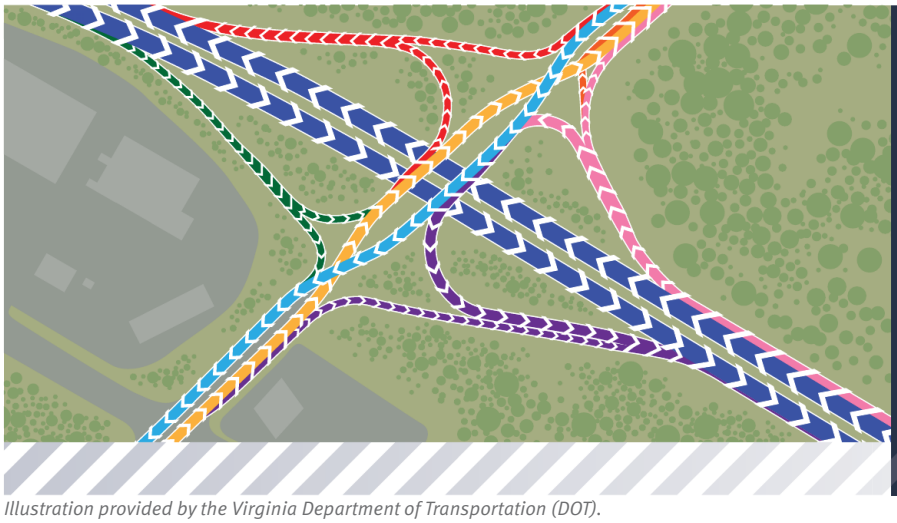

Improved traffic flow

An emerging concept of managing traffic called a diverging-diamond interchange (DDI) eliminates the need for left-turning vehicles to cross the paths of oncoming traffic. Improved traffic management and safety are the two main goals of the DDI system.

Illustration provided by the Virginia Department of Transportation (DOT).

> “We’ve found that a wheel loader is one of the most important pieces of equipment you can have on a road project.”
>
> — **CHRIS CALDWELL** / Branch Highways

For example, last year Branch Highways completed the installation of an additional high-occupancy toll lane on I-95 in northern Virginia. The nine-mile portion of the corridor, from exit 143 to exit 151, near the Quantico Marine base, is an exceptionally busy and congested stretch of interstate. It could not be closed and there could not be any interference with traffic flow during construction.

“One of the machines that performed very well at this site was our Doosan DX235LCR reduced-tail-swing excavator,” Caldwell says. “When we were laying pipe, the excavator had to work in a tight area, with several traffic lanes on one side and a barrier wall on the other side. This was a safety-driven job, so the excavator’s ability to work in a restricted area was invaluable.”

In addition to the DX235LCR excavator, Branch Highways has other Doosan equipment among its 300-machine inventory. Three crawler excavators, including a DX350LC-3 and DX225LC-3, are helping build a grade-separated, diverging-diamond interchange at the U.S. Highway 460 bypass and Southgate Drive near the entrance to Virginia Tech University in Blacksburg. The excavators handled a variety of jobs, including digging, loading trucks, moving materials and land-clearing.

“We’re not a land-clearing contractor,” Caldwell says. “However, the DX225LC-3 equipped with a (hydraulic) clamp removed brush from the jobsite. It was such a versatile machine that when it was done clearing the property, it went right to work laying pipe and handling erosion control and drainage projects.”

He also rates the DX350LC-3 high in versatility, a trait that the company discovered the first time it used the machine. It was at Liberty University in Lynchburg, Virginia, where multiple jobs kept the excavator very busy. “One day the DX350LC-3 was used to load dirt into trucks as we built ball fields; the next day it was doing sediment ponds, laying pipe and setting barriers,” Caldwell says. “That’s our bread-and-butter machine.”

The firm’s pair of Doosan wheel loaders delivers superior performance as well. The DL200TC-3 and DL250TC-3 are used for all of the firm’s storm drain jobs. Caldwell says the tool carriers and pallet fork attachments can pick up large pipe and move it around efficiently.

“We’ve found that a wheel loader is one of the most important pieces of equipment you can have on a road project,” Caldwell says. “That’s because it can do a number of different jobs at the same site. Among other things, we use our wheel loaders to constantly supply stone and pipe so projects keep moving forward. A load of pipe will usually be dropped in one location and if the job, for example, is 5 miles long, you need a reliable machine to handle the material.”

For a busy contractor like Branch Highways, versatile, dependable equipment is a must. That’s why the company has used Doosan products since 2008. **DM**

Visit **www.DoosanEquipment.com** and click on the corresponding product type for more information about Doosan crawler excavators, wheel excavators or wheel loaders.

UNMATCHED

The numbers don't lie.

The Doosan 5 year/7500 hour powertrain plus hydraulics factory warranty* is the strongest in the industry. Rest assured knowing we've got you covered.

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7500 HOUR
POWERTRAIN + HYDRAULICS
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OR

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DOOSAN

EXCAVATOR CALLED IN FOR EMERGENCY JOB STAYS AROUND

COMPANY INFO

Business: So Cal Excavating
In business since: 2009
Location: Casa Grande, Arizona
Doosan machines: DX225LC-3 crawler excavator, DL200-3 wheel loader
Doosan dealer: Ditch Witch® of Arizona

The city of Casa Grande, Arizona, is named after the nearby Casa Grande Ruins National Monument, a 650-year-old extended network of communities and irrigation canals.

In January 2014, that's not all that was in ruins. An inspecting engineer informed the public works department that manholes on an 18-inch PVC sewer line in Casa Grande had suffered almost total structural failure, posing an imminent danger of collapse.

Upon learning of the problem, the department contacted So Cal Excavating, a well-respected local firm that had previously been approved for city projects through the public works on-call services program.

That night Kevin Olive, who owns the company with his wife Jackie, visited the site and assessed the situation. He saw that the concrete of the existing manholes and bases was severely damaged from sulfuric acid — the result of high levels of hydrogen sulfide throughout the 28-year life of the pipeline. Other factors that contributed to the problem included failure to fill in around the previous 12-inch sewer line after it was abandoned many years ago and excessive loading by a power company that was working in the area.

The next day Kevin gave the city a price for replacing the manholes, bypassing the main sewer line during construction, backfilling, concrete and patching the pavement.

Kevin previously rented machines from Ditch Witch of Arizona, where he noticed Doosan equipment. The emergency project gave him an opportunity to test a Doosan excavator in a stressful and demanding situation. His dealer recommended renting a Doosan DX225LC-3 excavator.

After the manholes were replaced and the sewer was running smoothly, Kevin decided to purchase the DX225LC-3 excavator. "Once I had a chance to operate the DX225LC-3 for several days, in a difficult work environment — and a very dirty one at that — I could see what a productive machine it was and how we could benefit by owning the unit."

Improving economy keeps company busy

So Cal Excavating has created a successful niche for itself throughout an area that is called "the valley of the sun." The company does commercial work, installing underground utilities, both wet and dry.

The Olives moved to Arizona in 2006 after Kevin sold a similar firm he owned in California. After working a couple of years for another company, he opened So Cal Excavating in early 2009.

UNDERGROUND DISCOVERIES

A new Goodwill® store project at Higley Pavilion in Gilbert, Arizona, demonstrated the value of both the DX225LC-3 excavator and the DL200-3 wheel loader. The undeveloped site was once occupied by a dairy farm, so when Kevin Olive and his crew began digging to install utilities, they encountered some unexpected debris, mostly broken pieces of concrete. Both Doosan machines were used to extract the concrete and load it into trucks before hauling it away. The DL200-3 displayed its maneuverability as it worked around all of the construction at the site.

Owner Kevin Olive with his wife, Jackie, and sister, Audra

"It certainly was not the best of economic times," Jackie says. "We took a real shot in the dark, and eventually it paid off. We began with a single project — someone was willing to take a chance — that worked out very well. Through word-of-mouth, we keep growing."

As the economy improved, more contractors hired So Cal Excavating for their utility work.

"The last three years, we have had three to six jobs going on simultaneously throughout the valley," Jackie says. "It's all underground, except for paving, so you cannot see what we have accomplished, but I think our list of finished projects is quite impressive: Circle K gas station stores; Longhorn Steakhouse, IHOP, McDonald's and Raising Cane's restaurants; Goodwill® stores; and Toka Sticks Golf Club.

"As our business continues to grow, we added another family member to our team, Audra Olive, Kevin's sister. Audra is the company's safety compliance manager. We feel that it is important to emphasize safety on our construction sites, and Audra plays an important part in our company's success."

The Olives are well aware of the how the economy affects their bottom line. "In our line of work, it's either feast or famine," Jackie says. "We prefer feast, and that's what it has been the past few years."

The company's investment in Doosan heavy equipment — including the purchase of a DL200-3 wheel loader — is helping the Olives and their employees keep up with the opportunities available in a favorable economy.

"We have a schedule that needs to be met every day and that's not going to happen if our equipment is broken down and not available. We have been able to maintain our schedules much better since we now own a Doosan excavator and wheel loader. We consider them very reliable workhorses." DM

> "Once I had a chance to operate the DX225LC-3 for several days, in a difficult work environment — and a very dirty one at that — I could see what a productive machine it was and how we could benefit by owning the unit."
>
> — **KEVIN OLIVE** / So Cal Excavating

Visit **www.DoosanEquipment.com** and click on the Wheel Loaders or Crawler Excavators links on the Products tab to learn more about Doosan wheel loaders or crawler excavators.

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Ditch Witch® is a registered trademark of The Charles Machine Works, Inc.

CHANGING WITH THE TIMES PAYS DIVIDENDS

COMPANY INFO

Business: Loehmer Ag Products
In business since: 1995
Location: Monterey, Indiana
Doosan machines: DX225LC, DX225LC-3 (2), DX300LC-3, DX300LC SLR (super-long reach), DX420LC-5 excavators; two DL250-3 and one DL420 wheel loaders
Doosan dealer: Ronson Equipment

Navigating through 20 years of non-stop growth has not been as easy for Chris and Honey Loehmer as you might expect — based on their success. Loehmer Ag Products, based in Monterey, Indiana, has survived the ups and downs of the economy for two decades, but at the end of each year, the results have always been better than the previous year.

Honey and Chris Loehmer, company owners

"Certain avenues of income have dried up in different years," Chris says. "Whenever that occurred, we would look for other ways to build our business. As a result, the type of jobs we did changed back and forth over the years. It all seemed to work out okay."

Timely equipment purchases allowed the Loehmers to handle work in the new areas their business took them.

"I usually buy a machine when I see an immediate need for it," Chris says. "If some new type of project came along, I looked for the best equipment to handle it, knowing that if I purchased wisely I would find other uses for the machine, and perhaps open up additional markets."

That business strategy led them to Ronson Equipment, a Doosan heavy equipment dealer with stores in Lowell and Westville, Indiana. They purchased two machines in 2008, including a DX300LC super-long-reach excavator that they needed for a large ditch-cleaning project.

"Since that initial job, we have had very good luck with all our Doosan products," Chris says. "We have always been impressed with the eagerness in which the company wants to find out what users like and dislike about their equipment. They are very willing to listen to customers. We have made suggestions to Doosan and over the years have seen some of those changes incorporated into new products. It's nice to have a company that size caring about the usability of the equipment."

Start in dairy farm construction

When the Loehmers started their business 20 years ago, they focused on land clearing, site preparation and excavation for agriculture producers, especially dairy farmers in northeast Indiana. Then they added services including custom manure application and selling sand for bedding in dairy barns.

"Many of those farms started out small, and now some of them are up to 2,000 to

> "I am not afraid to knock on doors looking for business, and when I find it, I have a bad habit of not turning down work."
>
> — **CHRIS LOEHMER** / Loehmer Ag Products

3,000 cows," Chris says. "We provided a lot of dirt work for them as they added facilities, including grading, backfilling, installing underground utilities and pipes for irrigation. Our company grew right along with our customers."

That growth, however, was interrupted from time to time by low milk prices and other financial downturns in agriculture.

"Whenever I could see one type of work slowing down, I would look at other opportunities," Chris says. "I am not afraid to knock on doors looking for business, and when I find it, I have a bad habit of not turning down work."

Their current lineup of Doosan excavators provides the flexibility to handle a variety of jobs. For example, the DX420LC-5, their newest excavator, was purchased for some large dirt-moving projects for a client building an entire new 3,000-cow dairy farm.

The company purchased the DX420LC-5 with a longer arm for approximately 40 feet of reach to help move dirt more efficiently, according to Loehmer. "That will help generate a little more profit on each job," he says.

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> "With the Doosan excavators and wheel loaders, we believe we have the right equipment to handle a variety of jobs. They all do an excellent job of getting the work done."
>
> — **CHRIS LOEHMER** / Loehmer Ag Products

"Once the dirt projects are completed, we expect this large excavator to be very valuable for cleaning rivers. The DX420LC-5 should allow us to go after work that others may not have the capability of doing."

Diverse offerings

Working in rivers and ditches is just one area that the Loehmers moved into when the agricultural economy struggled. Other work includes:

- Cleaning ditches for several county governments
- Harvesting peat moss on their own 1,000-acre farm and selling the material to a bagging plant
- Demolishing structures
- Removing trees
- Operating a trucking division with 25 trucks to haul sand and gravel, peat moss, grain for local elevators and scrap metal for recyclers

"With the Doosan excavators and wheel loaders, we believe we have the right equipment to handle a variety of jobs," Chris says. "I use the larger excavators mostly for digging and dredging; the smaller ones for trenching, demolition and tree removal; and the wheel loaders for loading materials, including manure spreaders. They all do an excellent job of getting the work done.

"We like the Doosan machines because there is little or no downtime," he says. "They start every day and use the least amount of fuel compared to similar equipment. Most often they generate at least 100 billable hours a month and, at my company, that means they easily pay for themselves and make a profit."

As the Loehmers look to the future, they are committed to exploring new opportunities where their 30 employees and lineup of productive equipment can continue to help the company grow.

"If you specialize too much in this area these days, you are going to have some serious slowdown time," Chris says. "The way we work — looking at different types of projects — will usually keep us busy." DM

Visit **www.DoosanEquipment.com** to learn more about Doosan excavators and wheel loaders.

ROUTINE UNDERCARRIAGE INSPECTION

Keep your excavator running smoothly this construction season. Use this as a guide to properly maintain your excavator's undercarriage.

DAILY CLEANING

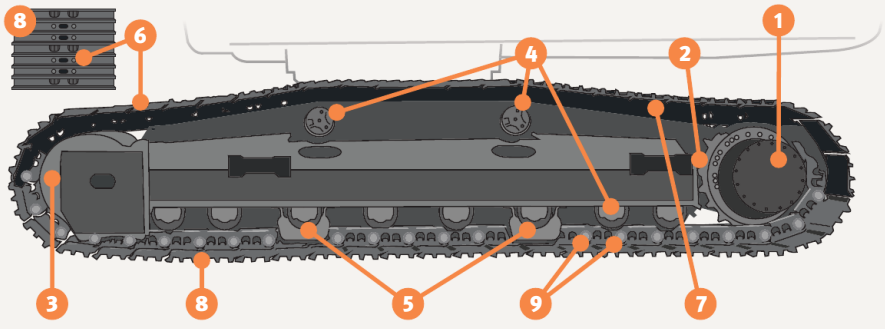
Take time to clean out dirt and debris to avoid premature wear on components.

PROPER TENSION

Maintain proper track tension to minimize wear. (See Operation & Maintenance Manual.)

INSPECTION

Visually inspect these nine key areas for excessive wear, missing components, oil leakage or damage.



1. Drive motor
2. Drive sprocket
3. Idler
4. Rollers (all)
5. Track guards*
6. Track bolts
7. Track links
8. Track shoe
9. Pins and bushings

If equipped

4 INGREDIENTS FOR SUCCESS IN THE SAND AND GRAVEL BUSINESS

COMPANY INFO

Business: Crockett Sand and Gravel
In business since: 1951
Location: Crockett, Texas
Doosan machines: DA40 articulated dump truck; DL250-5 and DL450-3 wheel loaders
Doosan dealer: Texas Timberjack

While the most abundant supply of U.S. oil rests below the vast Texas plains, there's another valuable underground commodity — the soil that supplies sand and gravel to a widely diverse group of customers.

In the eastern part of the Lone Star State, Crockett Sand and Gravel has a long history as a leading provider of high-quality sand and gravel products to concrete plants, construction projects and even homeowners who purchase a load of sand for landscaping projects.

According to a company official, four key ingredients have been critical to the organization's long-term accomplishments — including the use of Doosan equipment.

1 Meeting customer expectations

Originally founded as Holsey Brothers Sand & Gravel in 1951, Barry and Lee Holsey developed a solid reputation for consistently meeting specifications and fulfilling obligations on every job. Their quarry and production facilities on a 2,000-acre Trinity River site allowed the company to achieve preferred supplier status for some of the largest construction projects in Texas.

The brothers provided 1.8 million tons of state-approved material for the construction of the Dallas-Fort Worth International Airport. They were a supplier of choice for materials in the building of I-35 and I-45 interstate highways. When a major energy pipeline was constructed near Corrigan, Texas, the company delivered 117,000 cubic yards of select fill.

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2 Valuable resources in the ground

After the brothers went their separate ways, Crockett Sand and Gravel was established at a new site along the Trinity River. The company was up and running in late 1998 when Barry's son, Lee, opened a new plant. For the past 17 years, the river-bottom land has produced a variety of products, including pea gravel and sand for concrete plants and championship golf courses.

"Everything we take out of the ground gets made into something," says Stuart Perry, gravel pit foreman and one of the firm's 13 on-site employees. "We strip and load articulated dump trucks with a dragline and transport the material two miles to our plants. Typically, we produce the same amount of product each day and stockpile it around our property."

At times, the company has had as much as 80,000 tons on hand. Last May, however, the stockpiled total dropped to 2,000 tons because of a temporary spike in business. "The Trinity River flooded and most of the other gravel pits around here were shut down," Perry says. "We have a levee around our location, as do the others, but ours was tall enough to hold the water back. That's the closest we've ever come to running out."

Within the last year, plant capacity was increased to 3,500 tons per day. Sand is delivered every day to 13 concrete plants by the company's fleet of 23 trucks, each with a capacity of 27 tons. Before the plant expansion, Crockett Sand and Gravel sold 20,000 to 30,000 tons per month. Now the monthly average is around 50,000 tons, reaching as high as 70,000 tons at times.

"Today we are digging down about 25 feet," Perry says. "With about 600 acres of sand and gravel remaining at this location, we should be able to meet the demands of our customers for years to come."

3 Loyal customers

Concrete plants, construction firms and others have come to rely on Crockett Sand and Gravel for on-time delivery of quality products.

Texas Timberjack sales specialist Charles Bailey (left) and Stuart Perry

Two current highway projects in the Lufkin, Texas, area are typical of what the company provides to its customers. Webber, the largest heavy-highway construction company in Texas, is building a pair of new interchanges along U.S. Highway 59. The multi-year project receives loads of concrete sand and stabilized sand from Crockett almost every day. For the largest of the jobs, at the intersection of U.S. Highways 59 and 287, the company has delivered 30,000 to 40,000 tons of concrete sand — an aggregate sand usually composed of gneiss, trap rock limestone or granite — and about 12,000 tons of stabilized material. Some of the sand goes directly to a portable concrete plant while other loads are used behind retaining walls.

> "The DA40 saves a gallon of fuel an hour compared to the other trucks. Over an 11- or 12-hour day, that's significant."
>
> — **STUART PERRY** / Crockett Sand and Gravel

4 Leading-edge equipment

From its first manual dragline to today's automated excavation equipment and methods, Crockett Sand and Gravel has regularly made investments to meet job specifications and deliver quality products.

To keep up with the business that operates nonstop from 6 a.m. to 5 p.m., equipment needs to be reliable, productive and operator-friendly. A Doosan DA40 articulated dump truck (ADT), and DL250-5 and DL450-3 wheel loaders fit the needs of the company perfectly.

The DA40 is one of five hauling units that transport sand and gravel from the quarry to the plant throughout the day.

"Everything on the Doosan model is a little better than what we are used to in our other four trucks," Perry says. "The ride is smoother, the cab is more comfortable, visibility is better and fuel efficiency is superior. The DA40 saves a gallon of fuel an hour compared to the other trucks. Over an 11- or 12-hour day, that's significant."

The DA40, with a rated payload of 88,000 pounds, has a flexible and agile free-swinging gear-driven tandem bogey and front-mounted turning ring that allows all six wheels to maintain maximum ground contact, enabling the truck to work productively in off-road situations.

CROCKETT SAND AND GRAVEL'S FUEL $AVINGS*

Saves A GALLON of diesel fuel an HOUR

AVERAGE 11-HOUR WORKDAY = 11 GALLONS A DAY

X FIVE-DAY WORK WEEK = 55 GALLONS A WEEK

52 WEEKS PER YEAR >> 2,860 GALLONS A YEAR

AVERAGE COST OF DIESEL FUEL $2.105**

SAVINGS IN A YEAR $6,020.30

*Fuel efficiency examples cited are those of individual Doosan equipment owners. Fuel efficiency for your individual Doosan equipment may vary based on operating conditions and other factors.
**Source: AAA National Average Prices, April 1, 2016

While the ADT is hauling materials to the plant all day, the DL450-3 is in the quarry loading the trucks with a 6-cubic-yard bucket. The 354-net-horsepower wheel loader has the outstanding traction and lifting power necessary to efficiently keep production moving.

In comparing the DL450-3 with older Doosan wheel loaders, Perry says there are some important differences.

"The DL450-3 is a great machine," he says. "It's a whole lot more user-friendly, much easier to work on and maintain, and has a cab where the ergonomics are vastly improved."

For Crockett Sand and Gravel, using top-of-the-line equipment allows the company to keep up with customer demand and make on-time deliveries every day. DM

You can find more details about Doosan ADTs and wheel loaders by visiting **www.DoosanEquipment.com**, and clicking on the Articulated Dump Trucks or Wheel Loader links on the Products tab.

STAYING AHEAD OF THE GAME

COMPANY INFO

Business: Lakeview Sand and Gravel
In business since: 1947
Location: Paris, Ontario
Doosan machines: DL420-3 and DL420-5 wheel loaders
Doosan dealer: CG Equipment

Most pit and quarry operations that have a high volume of work tend to have a handful of full-time employees. However, Matthew Willson, owner of Lakeview Sand and Gravel, does things a bit differently. On average, Willson has only one full-time employee to assist him. During the busy season, he employs two more workers.

"I am very invested in my business," he says. "I find that anything I can save on is a profit to Lakeview Sand and Gravel. So whatever I can do myself — by being hands-on — during nights and weekends, is labor I do not have to pay for throughout the week."

The Willson family got its first taste of owning and operating its own company in 1947 when Willson's grandfather, Murvyn, started Paris Construction. As the construction business steadily grew, Willson's father, Robert, decided to try his hand at managing his own business. One of those businesses included the purchase of Lakeview Sand and Gravel, located in Paris, Ontario, in 1980. Growing up in the business and seeing how profitable the sand and gravel pit could be, Willson continued in his father's footsteps by buying the 300-acre quarry from his father.

"I have been around machinery all my life," he says. "That was my job. I did not just do it on the weekend — I would be on the jobsite every morning and running the machine all day. I saw how profitable the business could be and understood how the business worked, so I decided to buy the company."

Willson is a "one-man band" who sells material, works on invoices, collects garbage, cuts grass and mends fences at some time or another. He operates his two Doosan wheel loaders — a DL420-3 and DL420-5 — which are used to dig, transport and load material that is later screened and sold to local municipalities and construction companies.

Lakeview Sand and Gravel actively competes with other gravel pits in the area by using a variety of heavy equipment. The Doosan DL420-3 and DL420-5 wheel loaders complete a majority of the work. Willson bought his first Doosan wheel loader in 2002 and has bought a new Doosan loader approximately every four years since.

"I was a bit skeptical at first since I had not seen many Doosan machines before, but the machine was fantastic," he says. "Our wheel loaders have been the most consistent and reliable machines throughout the years."

Working efficiently with loaders

Both Doosan loaders play an important part in the transporting and screening process by helping dig the material, dump it into the screening plant, load the screened piles and place it into trucks. With dump heights of approximately 10 feet, Willson says he can work more efficiently and quickly with the wheel loaders. In addition to transporting material, Willson uses the machines for reclamation work, such as stripping the topsoil.

Large front and rear glass surface areas provide an excellent view to the loader workgroup and jobsite.

> “The machines really keep up and are very strong. We are moving some heavy material — rock, asphalt and recycled material — and the machines can lift it, no problem. There is a lot of capability of strength and power. As much as we have pushed them, they have certainly kept up.”
>
> **— MATTHEW WILLSON** / Lakeview Sand and Gravel

Since the wheel loaders are working 10 hours a day, five days a week, Willson says he makes sure he can get the best fuel economy while maximizing machine performance. “I use the Economy work mode and really notice the fuel change,” he says. “They are very good on fuel economy yet can be pushed hard.”

Maintaining good visibility is essential to maximizing loader performance and keeping operators safe, Willson adds. “Our wheel loader operators are pretty busy, so when there are a lot of people around, I want them to be able to see who is coming in and out of the gravel quarry,” he says.

Willson attributes his success to his employees, truck drivers, his reputation, making good business decisions and maintaining reliable equipment. By completing regular service intervals, such as checking the fluids and filters, Willson has bypassed any major issues with his Doosan wheel loaders.

“Anybody can work hard, but you’ve got to work smart,” Willson says. “I think the way I work smart is by working hard. My employees work hard, I work hard, but the machines work just as hard. As much as I’m invested in my business, I know that one of the things I don’t have to worry about is the machines and experiencing problems with my equipment.” DM

You can find more details about Doosan wheel loaders by visiting **www.DoosanEquipment.com,** and clicking on the Wheel Loader link on the Products tab.

Lakeview Sand and Gravel competitively sells and delivers a variety of material.

BEDDING

GRANULAR-RECYCLED LIMESTONE

RECYCLED ASPHALT

SALT

TOPSOIL

VIRGIN GRAVEL

In addition, the company produces granular A and granular B gravel, clear stone and two types of sand — fine and coarse. Granular A and granular B gravel are typically used for general construction projects, while the clear stone is sold to concrete and asphalt plants. Fine sand is used for backfill, and coarse sand is converted into salt sand during winter, and concrete and asphalt sand in summer.

FIRST DOOSAN EXCAVATOR GETS HIGH MARKS FROM NORTHEAST CONTRACTOR

COMPANY INFO

Business: R&D Site Development
In business since: 2005
Location: Groveland, Massachusetts
Doosan machines: DX235LCR crawler excavator
Doosan dealer: Equipment East

Imagine the condition of underground pipes buried more than 100 years ago. Now imagine if those pipes were your city's primary drinking water source. You may be concerned. So too were the folks in the Town of Scituate, Massachusetts.

Residents in the Town of Scituate voted in favor of a $22 million project in November 2013 to replace a 24-mile portion of the aged pipe system. One of the contractors working on a $3 million portion of the water main replacement project in 2015 was R&D Site Development, a construction company based in Groveland, Massachusetts, with extensive experience working in underground construction projects.

While a relatively young company, co-owners Bill Daley and Steve Reppucci have built a solid reputation for themselves in Massachusetts. "We started our business by doing small construction sites and small utility projects," Daley says. "That got bigger and bigger over the years. Now we do tens of thousands of feet a year with water and soil projects."

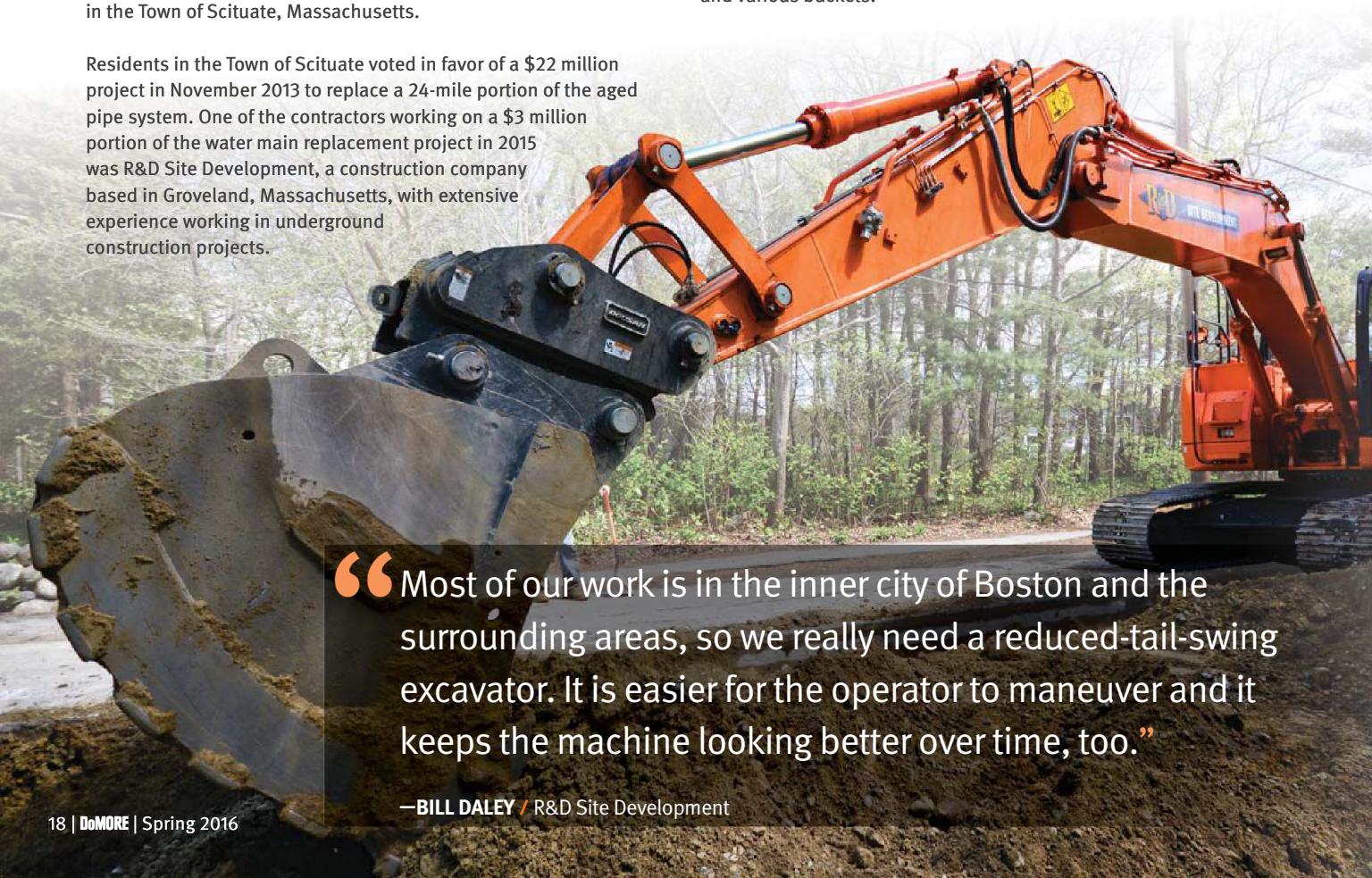
According to Daley, the R&D Site Development portion of the 2015 water main project included 30,000 feet of water mains, hydrants and services. Work began in May and took approximately 18 weeks to complete, as crews left existing water mains in the ground and R&D Site Development crews laid a new corridor of pipe below the streets.

Limited room to work

Like a lot of other cities in the northeast, Scituate's streets are narrow and do not provide much room for two-way traffic and parking, let alone construction projects. The town rerouted traffic while Daley, Reppucci and their crew performed the underground construction tasks. Daley says they started with a 4-foot-wide trench cut through the asphalt road. A Doosan DX235LCR reduced-tail-swing excavator, bought earlier in 2015 — the first Doosan purchase for the company — was instrumental in efficiently excavating dirt from the trench.

With Reppucci seated inside the excavator cab at the controls, soil was removed from the trench and left next to the spoil pile. "Steve likes the controls on the Doosan machine, its stability and the Doosan buckets that came with it," Daley says. "We didn't have to beef them up or anything. They were ready to dig."

Another area along First Parish Road and Maple Street had mature trees lining both sides of the road. Daley says his crew installed 12-inch pipe in the trench with the help of the DX235LCR excavator and various buckets.



> "Most of our work is in the inner city of Boston and the surrounding areas, so we really need a reduced-tail-swing excavator. It is easier for the operator to maneuver and it keeps the machine looking better over time, too."
>
> —**BILL DALEY** / R&D Site Development

Co-owners Bill Daley (left) and Steve Reppucci

The reduced-tail-swing excavator was the ideal machine for the underground project. Daley says his company purchased the excavator because of its size and agility. It is 10 feet 5 inches wide, and has a tail overhang of just 3 inches over the side.

"Most of our work is in the inner city of Boston and the surrounding areas, so we really need a reduced-tail-swing excavator," he says. "It is easier for the operator to maneuver and it keeps the machine looking better over time, too."

Dependability is critical to Daley because he cannot afford downtime in his busy construction schedules.

"We need machines that can dig every day, not break down and not be in the shop for repairs," he says. "Plus, the finance programs that Doosan offered fit perfectly for what we needed. The machine can dig every day and it's the perfect size for this job."

Versatility plays a part in the company's purchasing decisions, too. The ability to switch between buckets is important for Daley and Reppucci to best match the digging requirements and not over-dig. "The less digging, the better for us," Daley notes.

"Earlier in the project, we had two pipe sizes going in the same trench," Daley says. "We connected the 36-inch trenching bucket to the Doosan excavator and we were able to put in two pipes. Then, we went back to one pipe and we switched to the 24-inch trenching bucket, eventually converting to the 18-inch trenching bucket when we were installing smaller pipe."

The Doosan hydraulic quick coupler installed on the DX235LCR crawler excavator made it easy for them to switch back and forth between different trenching buckets. Reppucci can quickly change his Doosan buckets without leaving his seat. A quick coupler control box in the excavator's cab makes it simple to activate the quick coupler to lock or unlock the attachment connection mechanism.

Once Reppucci removed the soil from the trench, a worker used an upright compactor to compact the soil. Meanwhile, Reppucci rotated the excavator's house to access and lift a pipe, turned the house back to the trench and placed the 1,000-pound pipe in the open trench. A Bobcat® S650 skid-steer loader with a bucket backfilled the trench with the spoil after the pipe was put in place — a perfect complement to the excavator for working in a confined area.

"Every year we make changes to become more productive in our pipeline," Daley concludes. Purchasing a Doosan excavator was another step in the right direction for the company's continued success. DM

Visit **www.DoosanEquipment.com** and click on the Crawler Excavators link on the Products tab to learn more about Doosan crawler excavators.

RECOMMENDATIONS FROM LOGGING FRIENDS LEAD QUARRY OWNER TO DOOSAN EQUIPMENT

COMPANY INFO

Business: Westside Rock
In business since: 1997
Location: Hillsboro, Oregon
Doosan machines: DL450-3 and DL300-5 wheel loaders
Doosan dealer: Feenaughty Machinery

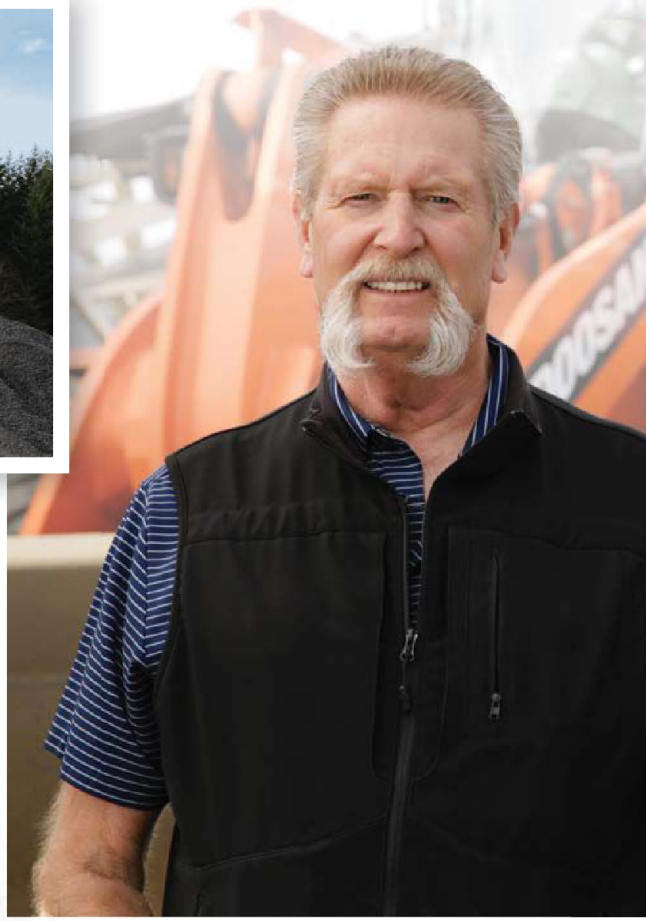
Oregon quarry owner John Malnerich benefits from knowing and working with loggers in his state. He regularly sells them rock for constructing roads to their logging sites and some have become friends he turns to for advice.

A few years ago, when Malnerich asked some of these friends about their Doosan log loaders, he recalls that all of the responses were similar: They spoke very highly of the machines — well-built, reliable equipment supported by excellent dealer service.

"I thought that if a company has one line of products that is good, there's a chance its other machines will be good as well," he says. "I was in the market for a new wheel loader and, based on those recommendations, the Doosan brand was worth a look."

After a visit to Feenaughty Machinery in Portland, Malnerich returned to his company, Westside Rock in Hillsboro, Oregon, with a DL450-3, a wheel loader he believes is perfect for the quarry business.

"Both the DL450-3 and the loader it replaced were capable of loading a dump truck in two trips, although the other loader was somewhat larger," he says. "The big difference is fuel consumption. The DL450-3 uses 35 gallons during a nine-hour shift and



> "The DL450-3 uses 35 gallons during a nine-hour shift and the other (brand of) machine consumed 85 gallons. Both machines did the same amount of work. That's a staggering savings of 50 gallons of fuel per day."
>
> — **JOHN MALNERICH** / Westside Rock

Lowered front side glass panels and narrow corner pillars increase visibility to the front of the machine.

the other (brand of) machine consumed 85 gallons. Both machines did the same amount of work. That's a staggering savings of 50 gallons of fuel per day."

Malnerich's son, J.J., who operates the wheel loader, reports that the machine has excellent visibility, is exceptionally quick and productive, and very comfortable to work in during his nine-hour days at the controls.

In the peak season, he loads as much as 7,000 tons a day.

At times, the firm's newest Doosan wheel loader, a DL300-5, comes over to help keep up with demand at the quarry. The machine normally works at Westside Readymix, Malnerich's concrete company in Forest Grove, Oregon, three miles from the quarry where the durable, dark-colored rock (Columbia River basalt) is mined. It is popular among contractors and residential clients alike. "This quality rock product has been a tremendous help to the business," Malnerich says. "Everyone wants to buy good rock."

John (left) and J.J. Malnerich

Respecting residential customers

While Westside Rock has a substantial commercial business, Malnerich takes great pride in servicing his company's residential customers.

"Those people were an important market when I started the company and, as a result, I like to keep taking care of the local folks," he says. "Many other quarries sell their rock to a landscape service or a landscape supply company, but I want to work directly with individual homeowners."

Several hundred residential customers typically purchase about five loads of rock a year, making that portion of Malnerich's business more than worthwhile.

"That's something our employees recognize, too," he says. "They know most of our private customers and will go the extra mile to help them. For example, it takes us about three-and-a-half minutes from the time someone comes in for a load of rock until they are on their way. I've heard that it can take up to 30 minutes at some other quarries. My guys are focused on getting the customer in and out quickly."

The DL450-3 wheel loader helps make that happen. **DM**

Visit **www.DoosanEquipment.com** and click on the Wheel Loader link on the Products tab to learn more about Doosan wheel loaders.

DEMO CONTRACTOR BUILDS BUSINESS WITH DOOSAN EXCAVATORS

COMPANY INFO

Business: Honc Destruction
In business since: 2002
Location: Fort Myers, Florida
Doosan machines: DX140LC-3, DX225LC-3 and DX300LC-3 crawler excavators; DL250-3 wheel loader
Doosan dealer: Synergy Equipment / Bobcat of Fort Myers

David Mulicka, president of Honc Destruction, with Mike Clementi of Synergy Equipment

As the residential and commercial building boom is picking up speed across Southwest Florida, the area's largest demolition company is playing a prominent role in driving the new economic engine.

"Since we are the front of the train on any redevelopment project, everyone wants us to get in and get out so they can get started rebuilding," says David Mulicka, president of Honc Destruction, experts in commercial and residential demolition. "Working quickly is one of our selling points. We can typically save the customer days or weeks on their schedule because we have the resources and equipment to complete a job more efficiently and safely than others in our trade."

Five years ago, when the Florida economy was rebounding, Honc Destruction had to rent equipment to keep up with the workload.

"We had no specific plan on renting a Doosan unit the first time that we tried one, but when I saw what that machine could do compared to other equipment we were using, I knew the next excavator I needed to purchase was a Doosan machine," he says. "It turned out to be a very wise choice."

As part of the residential building boom, property owners tear down 14,000-square-foot homes to build even larger ones.

The company purchased a pair of Doosan excavators in 2014, a Doosan DX300LC-3 crawler excavator and a slightly smaller DX225LC-3 crawler excavator, both equipped with severe-duty buckets, optional two-way auxiliary hydraulics and clamps. "They quickly became the operators' favorites in the fleet, thanks to a winning combination of power, speed, ease of maintenance and comfort," Mulicka says.

"With almost no waterfront property available, more people are buying existing homes, taking them down and replacing them with new structures," he says. "They want the lot more than they want the house. As a result, on average, we are demolishing one house every day. Some of the homes we are tearing down in the Naples area range from 12,000 to 14,000 square feet, and are being replaced by homes that are even bigger and nicer."

In 2002, Mulicka encountered a similar scenario that prompted him to start his demolition firm. At that time, he was part of the management team at Honc Marine Contracting, the premier builder of seawalls for thousands of waterfront properties, especially in the Cape Coral and Fort Myers, Florida, areas. Headquartered in Cape Coral, Florida, the marine company has been around for more than five decades, and has completed more than 13,000 seawall projects.

"Seawalls are faster and easier to replace on vacant lots, and because many owners wanted new homes anyway, we decided to add demolition services in order to enhance our seawall business," Mulicka says. "With the ability to use the same operators and equipment already needed to build a seawall at the same time, we could offer demolition services at a price and schedule that nobody else could match."

The right size equipment makes a big difference

These days a fleet of machines, including a pair of Doosan crawler excavators, along with a Bobcat® compact track loader and compact excavator, are helping Mulicka and his crews keep up with the demanding demolition schedule.

Bringing the most brute force to the jobsite is the DX300LC-3 crawler excavator. Operators like the combination of power, speed, ease of maintenance and comfort that the machine delivers.

continued on page 24

> “Both the DX300LC-3 and DX225LC-3 use about 15 to 20 percent less fuel than a similar machine of another brand.”
>
> — **DAVID MULICKA** / Honc Destruction

Watch a video to learn why Honc Destruction owner David Mulicka prefers the Doosan brand of excavators for demolition. Visit www.DoosanEquipment.com/David13

Honc Destruction recycles 80 percent of the materials the demolition company previously paid to get rid of.

"When I first compared the DX300LC-3 with a similar model of another brand that I already owned, my other excavator was not even close in power and speed," Mulicka says. "The brute force is superior. In fact, when I had three of my original machines working together, the DX300LC-3 outperformed the other two combined."

Not only can the Doosan excavator handle the daily demolition business, but it also makes sound financial sense, according to Mulicka.

"Both the DX300LC-3 and DX225LC-3 use about 15 to 20 percent less fuel than a similar machine of another brand," he says. "That makes a significant impact on operating costs. Plus, the financing terms offered by Doosan are very easy to work with. Dollar for dollar, Doosan excavators are probably the best machines for the price that I have ever seen."

The company was so impressed with the performance and reliability of its Doosan crawler excavators that it added a DX140LC-3 excavator with rubber tracks and hydraulic clamp to its fleet. "Our relationship with our sales agent, Mike Clementi, and the rest of the sales, rental and service team at Synergy Equipment, make Doosan construction equipment and Bobcat compact equipment the right machines for our business."

In addition to the heavy equipment, a pair of Bobcat® machines handles the tighter areas — a compact track loader with a bucket, industrial grapple and root grapple collect debris, while a sweeper attachment helps clean up jobsites. A compact excavator and hydraulic breaker attachment are used for selective demolition inside buildings.

This combination of heavy and compact equipment fits the firm's strategy of working quickly. For example, the company took a 93,000-square-foot Charlotte County school and turned it into a vacant lot in less than three weeks. That's typical of the fast service that Honc Destruction clients want these days.

Demo work uncovers a new revenue source

To deliver even faster demolition services that today's clients want, Honc Destruction recently purchased a 6-acre recycling facility for construction debris.

"Previously we had to haul what we tore down to 10 or 15 different places within our market areas in order to try to mitigate the hauling and disposal fees," Mulicka says. "Logistically it was difficult at times."

At the new centrally located facility, he says the plan is to recycle more than 80 percent of the materials the demolition company previously paid to get rid of. Recycling construction debris has received more attention in recent years as companies are adopting sustainability efforts and sending less debris to sanitary landfills. Several major commodity buyers are customers of Honc Recycling, an increased source of income for the business that saves their clients' money on their projects.

"Having our own recycling facility is a significant strategic advantage that allows us to be much faster and more productive because we no longer have to slow down and process and sort debris at the demolition site," he says. "We can load out and haul it away immediately and get the property ready for whatever is going to take place next. All the sorting is now done at our recycling facility. This vertical integration and delivery of services has dramatically changed our demolition enterprise."

Another benefit, according to Mulicka, is having better control of the process. "With our own people working in both demolition and recycling, we set the schedule, use our own trucks to haul debris and sort material in a very organized manner. Overall, it has made it much easier for our team to manage the logistics of our business."

Demolition is all about safely getting rid of what you are supposed to and protecting everything else, says Mulicka. "Having the right plan and the right people on the crews makes a big difference, and so does having the right equipment." DM

Visit **www.DoosanEquipment.com** and click on the Crawler Excavators link on the Products tab to learn more about Doosan crawler excavators and approved attachments.

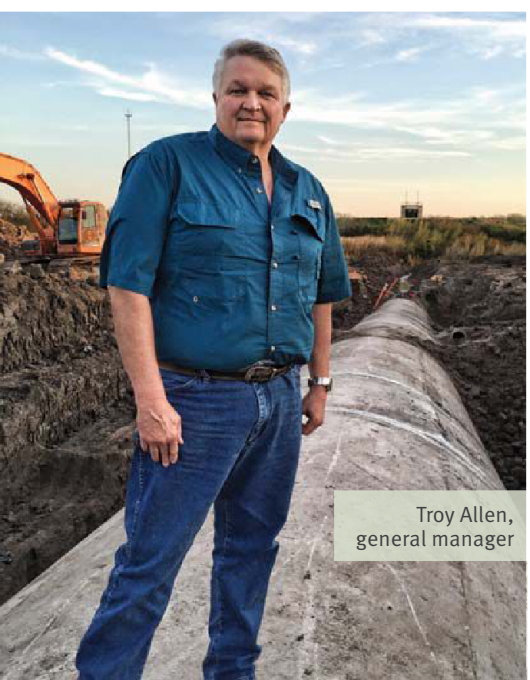
IMPROVED MAINTENANCE HELPS DELIVER IRRIGATION WATER TO SOUTH TEXAS

COMPANY INFO

Business: Delta Lake Irrigation District
In business since: 1914
Location: Edcouch, Texas
Doosan machines: Four crawler excavators and a DL250 wheel loader
Doosan dealer: H & V Equipment

Providing water to about 130 agricultural customers and 19,000 residents served by the Delta Lake Irrigation District is no easy task. The challenge is keeping the canals, ditches and reservoirs clean so the water flows throughout the lower Rio Grande Valley. The addition of Doosan excavators and a wheel loader has made that much less of a problem.

The Delta Lake Irrigation District in South Texas is the largest of the 26 irrigation districts in the valley. Although it's called a valley, the area is actually a delta that lies along the northern bank of the Rio Grande River that separates Texas from Mexico.



Troy Allen, general manager

The delta is a prime farm area. The district uses a series of canals, ditches and pipelines to deliver the water needed to irrigate 83,000 acres of agricultural land. Water for agricultural use is diverted 320 days a year because much of the land is double-cropped.

When Troy Allen, general manager, arrived at Delta Lake in 2003, maintenance of ditches and canals had been neglected for about six years. Some of the canals had 4 feet of silt in them, reducing water flow by two-thirds. The main cleaning tool, a dragline, was broken.

"The first year I was here, we purchased a Doosan excavator to clean out the ditches and canals," Allen says. "We were so far behind that we worked the machine 12 hours a day, five days a week. Within the first five years, we racked up 10,000 hours on the excavator and, as a result, the diverted water routes were in much better shape."

Cleaning ditches, canals

Eventually, Allen was able to purchase more excavators and a wheel loader. He had such good luck with the first Doosan excavator that he returned to the local dealer. With 165 miles of drainage ditches, 42 miles of earthen canals and three reservoirs to clean, the Doosan excavators stay busy. "The ditches and canals have to be cleaned every three or four years," Allen says. "Our soil is mostly sandy loam, so it regularly washes into the waterways. Silt builds up, especially after a storm." The earthen canals are 40 to 120 feet wide, and ditches range from 20 to 120 feet wide.

"Initially, we had to take out trees and brush from several of our waterways," Allen says. "We used the standard-reach excavator to remove that growth and followed with a super-long-reach machine to work to the center of the canals and ditches. Now, we mostly use the super-long-reach excavators to handle these projects.

"Our operators do a good job of spreading out the dirt. It's relatively easy to remove and relocate to areas where banks have to be raised," Allen says. "We use our Doosan wheel loader to load trucks for transport to other locations."

The district's three reservoirs total approximately 2,240 surface acres — that's more than 10 miles of surrounding banks that have to be cleaned of silt every three years. That work is handled by the excavators, too.

"Today we are getting so much more done that we receive compliments all the time. Everything is so much better when you have the right equipment." DM

For more information about Doosan excavators, visit **www.DoosanEquipment.com** and click on the Crawler Excavator link in the Products tab.

MATERIAL HANDLERS

	Model	Engine hp (kW) NET	Operating Weight lb. (kg)	Swing Torque lbf.-ft. (kgf-m)	Drawbar Pull lbf. (kgf)	Max. Reach (Ground) ft./in. (mm)	Max. Loading Height (Pin) ft./in. (mm)
NEW	DX210WMH-5	189 (141)	58200 (26399)	59224 (8188)	26742 (12130)	35' 9" (10900)	39' 8" (12100)
	DX225MH-3	162 (121)	60848 (27600)	60757 (8400)	60715 (27540)	35' 5" (10800)	40' (12200)
	DX300MH-5	358 (267)	79366 (36000)	87787 (12137)	83258 (37765)	42' 7" (13000)	46' 3" (14100)

MH = material handler / **W** = wheel

WHEEL LOADERS

Model	Engine hp (kW) NET	Operating Weight lb. (kg)	Bucket Capacity cu. yd. (m^3)	Max. Dump Height ft./in. (mm)	Breakout Force lbf. (kg)
DL200-5	142 (106)	25794 (11700)	2.6 (2)	9' 5" (2871)	22481 (10197)
DL200HL-5	142 (106)	26566 (12050)	2.6 (2)	10' 11" (3328)	22931 (10401)
DL200TC-5	142 (106)	26224 (11895)	2.6 (2)	8' 9" (2667)	21357 (9687)
NEW DL220-5	160 (119)	27381 (12420)	3 (2,3)	9' 3" (2825)	22706 (10299)
NEW DL220HL-5	160 (119)	28296 (12835)	3 (2,3)	10' 8" (3270)	25180 (11421)
DL250-5	172 (128)	30115 (13660)	3.3 (2,5)	9' 2" (2802)	23830 (10808)
DL250HL-5	172 (128)	31129 (14120)	3.3 (2,5)	10' 7" (3226)	23380 (10605)
DL250TC-5	172 (128)	31592 (14330)	3.3 (2,5)	9' (2749)	22930 (10401)
DL300-5	271 (202)	41844 (18980)	4.2 (3,2)	9' 4" (2845)	37768 (17131)
DL300HL-5	271 (202)	42869 (19445)	4.2 (3,2)	11 '1" (3378)	36644 (16621)
DL350-5	271 (202)	43541 (19750)	4.8 (3,7)	9' 11" (3040)	36869 (16723)
DL350HL-5	271 (202)	44743 (20295)	4.8 (3,7)	11' 8" (3556)	35969 (16315)
DL420-5	345 (257)	50783 (23035)	5.5 (4,2)	10' 1" (3075)	47210 (21414)
DL420HL-5	345 (257)	51919 (23550)	5.5 (4,2)	11' 9" (3581)	45187 (20496)
DL450-5	345 (257)	56868 (25795)	6.3 (4,8)	10' 7" (3226)	51930 (23555)
DL450HL-5	345 (257)	57618 (26135)	6.3 (4,8)	12' 2" (3708)	51256 (23250)
DL550-5	380 (283)	69887 (31700)	7.5 (5,7)	11' 2" (3405)	55303 (25085)
DL550HL-5	380 (283)	71617 (32485)	7.5 (5,7)	12' 6" (3830)	56887 (25799)

HL = high lift / **TC** = tool carrier

ARTICULATED DUMP TRUCKS

Model	Engine hp (kW) NET	Operating Weight (empty with tailgate) lb. (kg)	Max. Loaded Weight (with tailgate) lb. (kg)	Heaped Capacity (with tailgate) cu. yd. (m^3)	Payload lb. (kg)
DA30-5	362 (270)	54564 (24750)	116294 (52750)	23.3 (17,8)	61729 (28000)
DA40-5	483 (360)	70107 (31800)	158292 (71800)	34 (26)	88185 (40000)

Specifications and design are subject to change without notice

EXCAVATORS

CRAWLER / WHEEL

Model CRAWLER	Engine hp (kW) NET	Operating Weight lb. (kg)	Arm Breakout Force lbf. (kg)	Max. Digging Depth ft./in. (mm)	Max. Reach at Grade ft./in. (mm)	Max. Dump Height ft./in. (mm)
DX63-3	59 (44)	13779 (6250)	5765 (2615)	13' 6" (4115)	20' 5" (6230)	13' 11" (4267)
DX85R-3	59 (44)	18960 (8600)	8069 (3660)	15' 6" (4725)	23' 11" (7295)	16' 4" (4995)
DX140LC-5	113 (85)	32783 (14870)	13228 (6000)	20' 1" (6135)	27' 11" (8530)	21' 1" (6440)
DX140LCR-5	113 (85)	34987 (15870)	13228 (6000)	19' 7" (5985)	27' 11" (8530)	23' 2" (7080)
DX180LC-5	129 (96)	43224 (19606)	20503 (9300)	20' (6110)	29' 7" (9020)	21' 3" (6500)
DX225LC-5	162 (121)	52086 (23626)	23810 (10800)	21' 7" (6580)	31' 10" (9710)	22' 5" (6840)
DX225LC-5 SLR	162 (121)	55731 (25279)	13228 (6000)	38' 2" (11650)	50' (15265)	35' 6" (10845)
DX235LCR-5	181 (135)	56019 (25410)	24471 (11100)	21' 10" (6670)	31' 7" (9630)	26' (7950)
DX255LC-5	184 (137)	57752 (26196)	28219 (12800)	22' 4" (6810)	32' 9" (9995)	23' (7025)
DX300LC-5	267 (199)	68764 (31191)	30644 (13900)	23' 11" (7305)	34' 6" (10530)	23' 10" (7280)
DX300LC-5 SLR	267 (199)	72462 (32868)	16535 (7500)	45' 2" (13780)	57' (17390)	39' 3" (11975)
DX350LC-5	313 (233)	80654 (36580)	41667 (18900)	24' 8" (7535)	35' 11" (10970)	23' 6" (7175)
DX420LC-5	338 (252)	94799 (43000)	43431 (19700)	25' 4" (7740)	37' (11290)	25' 3" (7710)
DX490LC-5	373 (278)	112206 (50896)	50045 (22700)	25' 6" (7790)	38' 11" (11865)	25' 9" (7865)
DX530LC-5	373 (278)	116576 (52878)	56879 (25800)	24' (7340)	37' 6" (11455)	25' 4" (7725)
DX530LC-5 SLR	373 (278)	117112 (53121)	26235 (11900)	49' 7" (15125)	63' 9" (19455)	39' (11890)

Model WHEEL	Engine hp (kW) NET	Operating Weight lb. (kg)	Arm Breakout Force lbf. (kg)	Max. Digging Depth ft./in. (mm)	Max. Reach at Grade ft./in. (mm)	Max. Dump Height ft./in. (mm)
DX140W-5	124 (93)	31526 (14300)	17064 (7740)	14' 8" (4490)	24' 2" (7375)	19' 4" (5905)
DX190W-5	168 (125)	43431 (19700)	20944 (9500)	18' 9" (5725)	29' 8" (9050)	22' 2" (6765)
DX210W-5	174 (129)	46077 (20900)	24030 (10900)	19' 4" (5905)	31' 10" (9705)	23' 4" (7115)

LC = long carriage / **LCR** = long carriage, reduced tail swing / **W** = wheel / **SLR** = super-long reach

LOG LOADERS

Model LOG LOADER	Engine hp (kW) NET	Operating Weight lb. (kg)	Max. Loading Reach ft./in. (mm)	Max. Loading Height ft./in. (mm)	Swing Speed rpm	Draw Bar Pull lbf. (kgf)
DX225LL	146 (109)	65036 (29500)	36' 3" (11049)	42' 5" (12929)	11.7	71070 (32237)
DX300LL-5	267 (199)	81703 (37060)	38' (11582)	43' 1" (13132)	9.9	66138 (30000)

LL = log loader

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